
NUWC looking back...

To celebrate NUWC Division Newport's 140th anniversary, a series of articles about its history will include profiles on a number of the commanding officers of the original Newport Torpedo Station, established on Goat Island in 1869. Each month there will also be excerpts from a series of articles that ran in *NUSCOPE*, the predecessor to *NUWSCOPE*, in 1977 that documented the history of the Naval Torpedo Station from colonial days to 1925.



Rear Adm. George A. Converse, USN, was Commander of Naval Torpedo Station (NTS) from 1893 - 1897

Rear Adm. George Albert Converse was noted for his service as an officer of the U.S. Navy and for his contributions in the area of naval engineering. Born on May 13, 1844, in Norwich, Vt., Converse attended Norwich University and was a member of Theta Chi Fraternity. He was appointed Midshipman on November 29, 1861.

One of the first officers involved in the introduction of electricity aboard men-of-war, he was a pioneer in the experimentation of smokeless powder and its introduction to the Navy. In 1876, he was also instrumental in obtaining *Lightning* (Steam Launch No. 6), a spar torpedo boat designed by Nathaniel G. Herreshoff. He was selected to be Commander of the Naval Torpedo Station in Newport, R.I., in 1893 and was relieved by Lt. Cmdr. T.C. McLean in 1897.

In command of *Montgomery*, Converse took an active part in operations off the coast of Cuba with Adm. William T. Sampson's squadron during the Spanish-American War, 1898. He was Commanding Officer of USS *Illinois* (BB-7) from her commissioning in 1901 to 1903.

Secretary of the Navy Victor H. Metcalf (1906-08) stated that he regarded Converse's services as "...almost indispensable to the Navy, in view of his detailed knowledge of almost every branch of the service." He promoted Converse to rear admiral in 1903 and appointed him to Chief of the Bureau of Equipment, Ordnance, and Navigation. As such, he was immediately appointed President of the Board of Construction, a

position created for the Admiral. Converse's challenge was to work out details for the construction of two 20,000 ton battleships.

In 1904, when only the first 16 torpedo boat destroyers were in commission, President Theodore Roosevelt ordered the Navy to convene a board under Converse's leadership to "consider the types and qualities of torpedo vessels and their machinery." The board developed a functional description for future destroyers, which was first applied in the design of the Smith- and Paulding-class "flivvers" of fiscal years



Rear Adm. George A. Converse

1907-11.

Although Converse retired in 1906, he continued to serve as Chief of the Bureau of Equipment, Ordnance, and Navigation for another year. Converse died in Washington, D.C., March 29, 1909.

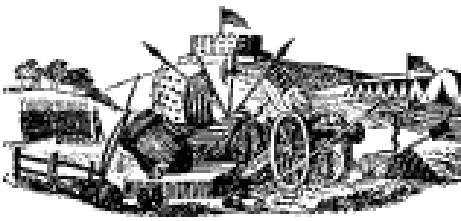
Two destroyers have been named USS *Converse* in his honor. The *Converse* (DD-509) was launched and commissioned in 1942 in Bath, Maine. A Clemson-class (DD-291) was also named *Converse*.

—compiled by **Diane Chellis, MRC**
(Source: Arlington Cemetery, Navy Historical Center, The New York Times, and Wikipedia websites)



In 1893, while Commander George A. Converse was C.O. of the Naval Torpedo Station, an overhead trolley system was installed in the factory. (Naval War College Museum photo)

The Naval Torpedo Station 1890 - 1901



Information on the historic U. S. Naval Torpedo Station was compiled under the direction of Capt. Martin E. Trench, USN, Inspector of Ordnance in Charge, and J. P. Sullivan, the Station's Chief Clerk and by W. J. Coggeshall and J. E. McCarthy, employees of the Ordnance Department of the Torpedo Station, 1920 for the booklet entitled "The Naval Torpedo Station."

*Excerpted from NUSCOPE
April 1, 1977*

NAVAL ACQUISITION AND OCCUPANCY

In 1890 a torpedo boat store house was built in connection with which there was a marine railway.

During the year the South end of the main storehouse was fitted up as an emergency hospital ward and the North end was used for the instruction of seamen. The emergency hospital was probably installed as a precautionary measure because of the epidemic of influenza which raged in Newport during the winter. It is recorded, however, that the health of the command was excellent during that period.

The new time ball and apparatus installed in 1887 was evidently satisfactory for it was at that time reported that "the time ball was dropping uniformly." The current was furnished from the Observatory at Washington through the Western Union Telegraph Company.

A primer house was also erected at the Torpedo Station in 1890 and experiments with primers were commenced.

In 1891 the *Triana*, which had been attached to the Torpedo Station since the beginning, was wrecked at Cuttyhunk. Her loss was a severe one as she had provided comfortable quarters for the enlisted men and was valuable for

experimental work.

In December 1891 the tug *Fortune* was assigned to the Station to replace the *Triana*.

At this time the Patrick torpedo was being tested. The Whitehead, however, was officially adopted and a contract let to the Bliss Company for 100 at \$2,000 each. What was evidently the first order for smokeless powder, 50 pounds, was received from the Bureau of Ordnance in 1891 and manufactured.

The manufacture of primers was begun in 1891.

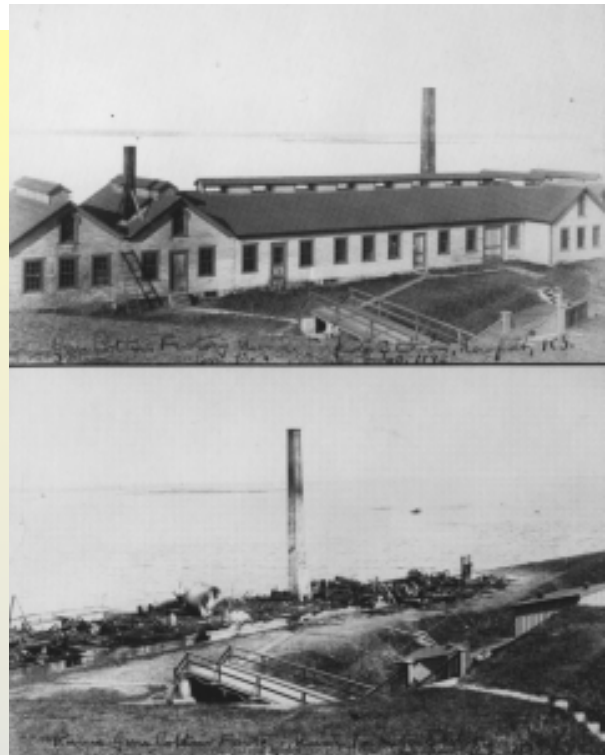
During 1892 the *Stiletto* was fitted with Howell tubes for experimental purposes. The Hall automobile torpedo was being experimented with and its construction and assembly studied. The Patrick and Howell torpedoes were both accepted by the Government and two of the former and one of the latter were on hand at the Station for experimental purposes. The old spar torpedo had changed its identity and was being experimented with as a defense mine.

Commander George A. Converse took command of the Station in January 1893, relieving Commander Jewell under whose direction the facilities had been extended to include the manufacture of smokeless powder and primers.

EXPLOSION KILLS THREE

On July 3, 1893, the gun cotton factory was totally destroyed by an explosion caused by the presence of a foreign substance in the picker. Three men, Frank Laughlin, 1st class pipe fitter, and Jeremiah Harrington and Michael Reagan, laborers, were killed, and 10 men were seriously injured.

During the year 1893 an outfit composed of ordnance and ordnance



Before and after photos of the gun cotton factory reveal the effects of a disastrous explosion that occurred in 1892 that killed three men and seriously injured 10 others. Despite this loss and the dangerous nature of experimenting with explosives, the overall safety record for the Station was very good. (Source: A Century of Progress)

materials was prepared and shipped to the World's Columbian Exposition at Chicago, Illinois, for exhibition purposes.

In 1893 the Hall torpedo was being extensively experimented with; torpedo defense nets were given exhaustive tests and proved successful; experiments were being carried on with war colors for boats, and an overhead trolley system was installed in the factory.

The water supply capacity was found inadequate and was doubled in 1894.

During that year the gun cotton factory, destroyed in 1893, was rebuilt and the manufacture of gun cotton was recommenced. During 1893, 145 Whitehead torpedoes, the first contracted for, were received at the Station.

The fire attending the explosion in the
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gun cotton factory in 1893 had demonstrated the fact that the Station's fire equipment was obsolete, and in 1895 a hose reel containing 1,000 feet of hose and a complete new equipment was purchased for the proper fire protection of the Station.

Excerpted from NUSCOPE
April 15, 1977

NAVAL ACQUISITION AND OCCUPANCY

The fast torpedo boat *Stilletto* was fully equipped for use in experimenting with Howell torpedoes and for instruction purposes.

The *Cushing*, of similar type to the *Stilletto*, having been added to the Station, was engaged in carrying on experiments of various kinds.

The manufacture of spar torpedoes had long since been discontinued and they were now, besides undergoing conversion to mine use, being used for wrecking purposes.

In 1895 the Torpedo Station undertook tests and experiments with air compressors to be used in charging the new automobile torpedoes.

Up to this time there had been received at the Station 150 Whitehead torpedoes, 70 Howells. Of this number, 16 Whitehead and six Howells were kept on hand to meet emergencies. Two Whiteheads and one Howell were being used for experiments.

In 1896 it was proposed to replace the Inspector's Quarters with a more substantial building, the present one being considered unsuitable. Apprehension was felt for its safety because of the high winds which prevailed.

In September 1896 the tug *Leyden* replaced the *Fortune*, the latter going to Norfolk for repairs.

Under Commander Converse the Station activities were confined to the development of the extensive experimental projects then in progress, principal among which was the development of the air compressor. In June 1897 Lt. Cmdr. T. C. McLean took command relieving

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Then and Now...



In 1900 the Naval Torpedo Station (NTS) was in transition. It was functioning as the Navy's "corporate headquarters" for automobile torpedoes. "...providing a full spectrum of technical support to both industry and the fleet, [it] had become the focal point for Navy torpedo efforts." (*A Century of Progress*, NUWC, p. 46). The photo above, taken in 1910, is an aerial view of downtown Newport showing NTS on Goat Island in the background. A similar view in the photo below, taken from the Viking Hotel on Bellevue Avenue, shows the expansive development of the area in the past century. There is little evidence of NTS on Goat Island, which is in the distance to the right of the steeple. One remaining structure from the Navy years remains—a large white concrete building that houses a restaurant and offices for the Goat Island Marina and marine-related businesses. ("Now" photo by Dave Stoehr, Code 11412)



The Naval Torpedo Station...

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Commander Converse.

On July 15, 1897, an explosion of green cannon powder, caused by friction in sifting, occurred in the smokeless powder factory. The inside of the building was demolished, the roof blown off and two men seriously injured.

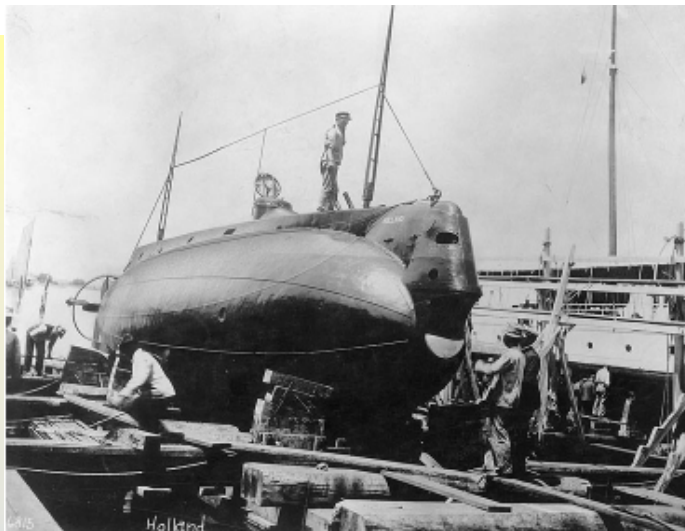
During 1897 a furnace was installed for the manufacture of Calcium Phosphide.

At this time, in 1898, the Schwartzkopff torpedo was evidently obtained to meet the emergency occasioned by the Spanish-American War. A tube was mounted for experimental purposes, and 12 torpedoes were purchased and sent to the Station.

March 13th the tug *Leyden* was detached from the Station and sent to Cuba fitted as a gunboat. She also carried an air compressor for charging torpedoes.

During the year 125 pounds of calcium phosphide of a superior quality were manufactured.

In September 1898, the civilian force at the Station numbered 144 men.



The USS Holland, the U.S. Navy's first submarine, was purchased on April 11, 1900 for \$120,000. It is shown in this photo hoisted out for repairs, circa 1900 (U.S. Naval Historical Center Photo)

Commander McLean, whose administration had extended through the Spanish-American War, was relieved in October 1899 by Lt. Cmdr. N. E. Mason.

Electric lights were installed in the Seamen Gunner's Quarters during 1899 and the Torpedo boat *Morris* was assigned to the Station for duty.

In 1900 the Submarine Boat *Holland*,

the first submarine of the United States Navy, came to the Torpedo Station for demonstration and trial.

June 15, 1900, the Station Fleet was further strengthened by the assignment of the torpedo boat *Gwin*.

It is interesting to note that in July 1900 the Navy Pay Office was established in Newport.

On December 14, 1900, the gun cotton dry house was badly damaged by an explosion which was caused by decomposition of gun cotton.

At this time the civilian force employed numbered 157 men.

In 1901 the grounds were graded, trees planted and the landscape generally improved and beautified.

An electric motor, which was formerly used to run a lathe in the Carpenter shop, was successfully used to operate the printing press.

May 10, 1901, a detachment of marines consisting of five officers, 15 non-commissioned officers and 25 privates were attached to the Station for instruction in mining and countermining.

(to be continued next issue)

The Flying Devil Torpedo was "Hit" of New Bedford Parade

One little known but spectacular torpedo trial involved Patrick Cunningham and the rocket torpedo he invented in 1892. His torpedo was 17 feet long and had a maximum diameter of 15¼ inches across the forward end. The warhead was made of copper and could carry 125 pounds of explosive. The torpedo itself was made of ¼-inch iron and could travel one mile at the rate of 50 feet per second. Helical ribs on the outside surface gave the torpedo a spinning motion which improved stability. The propulsion system was composed of four powder chambers. These chambers were made of copper and contained another of Cunningham's inventions—242 pounds of slow-burning powder which was forced into the chambers under a hydraulic pressure of 10 tons per square inch.

Cunningham was an ardent supporter of William Jennings Bryan for President. When McKinley forces in New Bedford, Mass., held a giant pre-election parade for their candidate, the

inventor decided that his man would not be outdone.

Filled with spirits and enthusiasm, Cunningham rolled the torpedo out of his yard and into the street. Straddling the weapon, he planned to ride it at the head of his own parade. While astride the weapon, he attempted to light it off with a burning newspaper that was rolled up to form a torch. Luckily, his son was present and pulled him off.

Not one to be denied, Cunningham ignited the rocket torpedo with matches and blasted it off. Fire shot from the portholes in the sides and tail of the weapon. Hissing as it went, the torpedo scorched two horse-drawn carriages in its wild flight. People scattered and ran from its path. Finally, the torpedo hit a tree stump and exploded violently. Five houses and a store were severely damaged in the blast. Luckily, the only casualty was a bystander who had half of his handlebar

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moustache shaved off by a piece of flying metal. From that day on, Cunningham was known to his friends as the "Wild Irishman," and his torpedo was called "The Flying Devil."

In 1898, Cunningham, having built more rocket torpedoes, was again ready to demonstrate his weapon. For these firings, he purchased the schooner *Freeman* and installed a torpedo tube in the forward part of her hold. The tube was his original design. It was primarily a drawn steel tube, 20 feet long and 16 inches in diameter, and weighed two tons. It projected about a foot through the hull of the *Freeman*, just beside the cutwater, and was parallel to and close to the keel on the starboard side. Steel straps five inches wide and one inch thick were bolted to the timber bed to hold the tube in position. The breech was closed and made watertight by pressure. Electrical current was supplied by a cable that ran from a battery on deck, through a hatch, to the tube in the hold.

The first torpedo fired broached about 40 feet from the *Freeman* and buried itself deep in the mud on the bottom of Buzzard's Bay. The second torpedo exploded in the tube. It tore such a hole in the *Freeman's* bottom that she sank almost immediately. Fortunately, no one was hurt.

This ill-fated venture marked the end of Cunningham's attempts to develop a rocket torpedo, but his idea was not abandoned, and later resurrected to become one of our modern day weapons. □



The Cunningham Rocket Torpedo (aft end of the torpedo appears at far right) and its inventor, Patrick Cunningham, are shown in this photo taken at New Bedford, Mass., in July 1893. Lack of accuracy and wide variations in speed kept the Cunningham and other early rocket torpedoes in the experimental stages.

Photos in Building 148's stairwell tell a story

As we commemorate the 140th anniversary of our organization, the new History Wall located in B-148 (north stairwell) provides an opportunity to learn about the historical significance of the Naval Torpedo Station. Initiated by Rob Mushen (Code 8114), it is a unique display of rarely seen photos from 1860 through 1917, courtesy of the Naval War College (NWC). The History Wall chronologically organizes images from the NWC museum archives and includes descriptive information for each. While perusing boxes of photos borrowed from the NWC archives to make selections for the display, touching letters from widows who donated photos from their husbands' possessions were found. Please take a few moments to view this interesting display and learn about NUWC's amazing history. A future project is being planned in an adjacent hallway by Marie Bussiere, Code 811, to display modern torpedo models and images.



A new history wall in the north stairwell of Building 148 features many rarely seen photos of the Naval Torpedo Station on Goat Island. (Photo by Ron Stern, MRC)